PFAS, Ecology, and the PFAS Chemical Action Plan

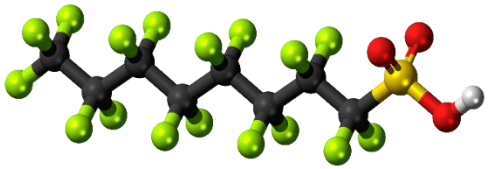
Snohomish Implementation Committee Meeting

Kara J. Steward
Hazardous Waste and Toxics Reduction Program
May 29, 2019

DEPARTMENT OF ECOLOGY
State of Washington

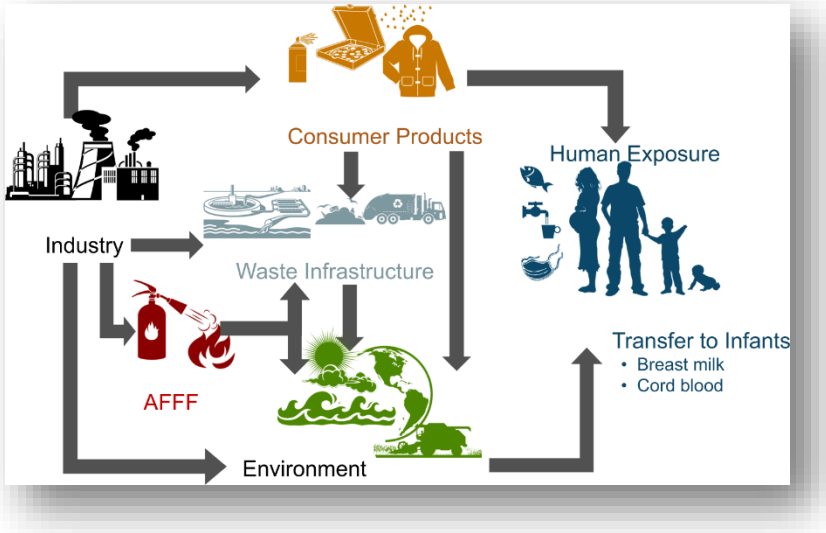
Per- and Polyfluorinated Alkyl Substances

- 4,700 chemicals in the class
  - Repel oil and water
  - Resist high temperature
  - Reduce friction
- Concerns
  - Persistent
  - Toxic
  - Bioaccumulative
  - Mobile



PFOS molecule

$CF_3CF_2CF_2CF_2CF_2CF_2CF_2CF_2SO_3H$



https://www.nature.com/articles/s41370-018-0094-1

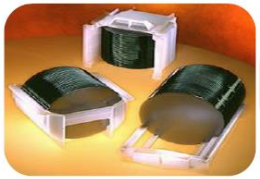
PFAS-Containing Products

Electronics: High frequency signal transmission; smudge-resistant touch screens

Membranes in outdoor apparel, providing a breathable barrier against wind and rain

Medical Devices: High dielectric insulators in medical equipment that relies on high frequency signals

Aerospace/Auto: Weight reducing fuel lines; heat/chemical resistant wire coatings



Semiconductor manufacturing: Providing pure environments to transport/store harsh chemicals

Nonstick surfaces in cookware and small appliances

Healthcare: Garments/Drapes that Protect Against Disease Transmission

First Responder Gear Treatments and Bulletproof Vests that Maintain Performance in Extreme Conditions

Oil/Grease Resistant Food Packaging that is Recyclable, Increases Shelf-Life, Reduces Packaging

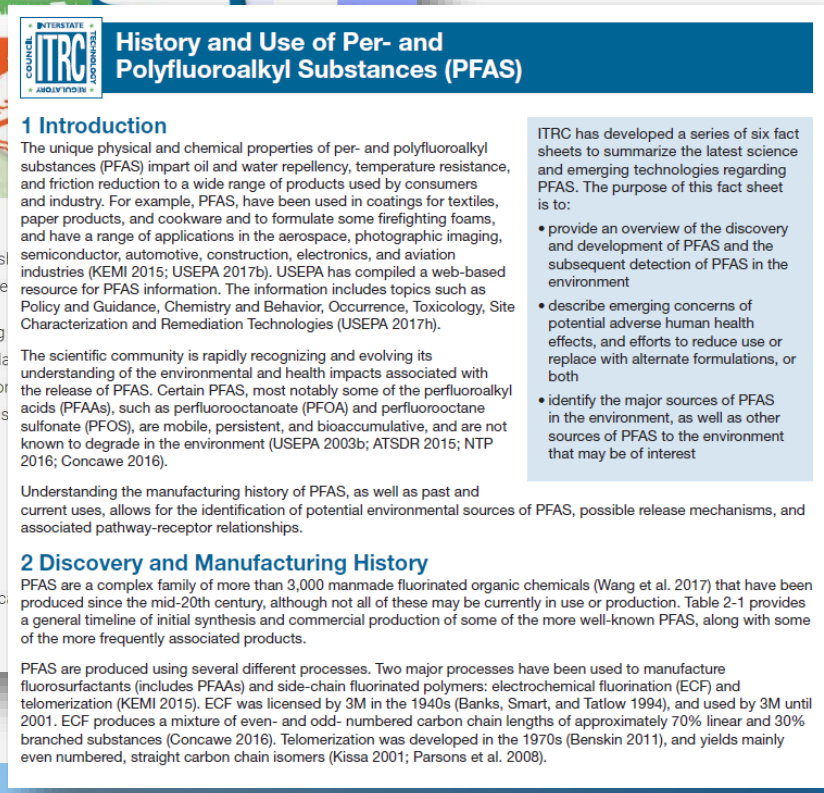
Textiles/Carpet with Water/Oil Repellency, Stain Resistance and Soil Release and Longer Useful Life

Class B (Flammable Liquid) Fire Fighting Foam with Shorter Extinguishing Time and Burnback Resistance

FluoroCouncil
Global Industry Council for FluoroTechnology

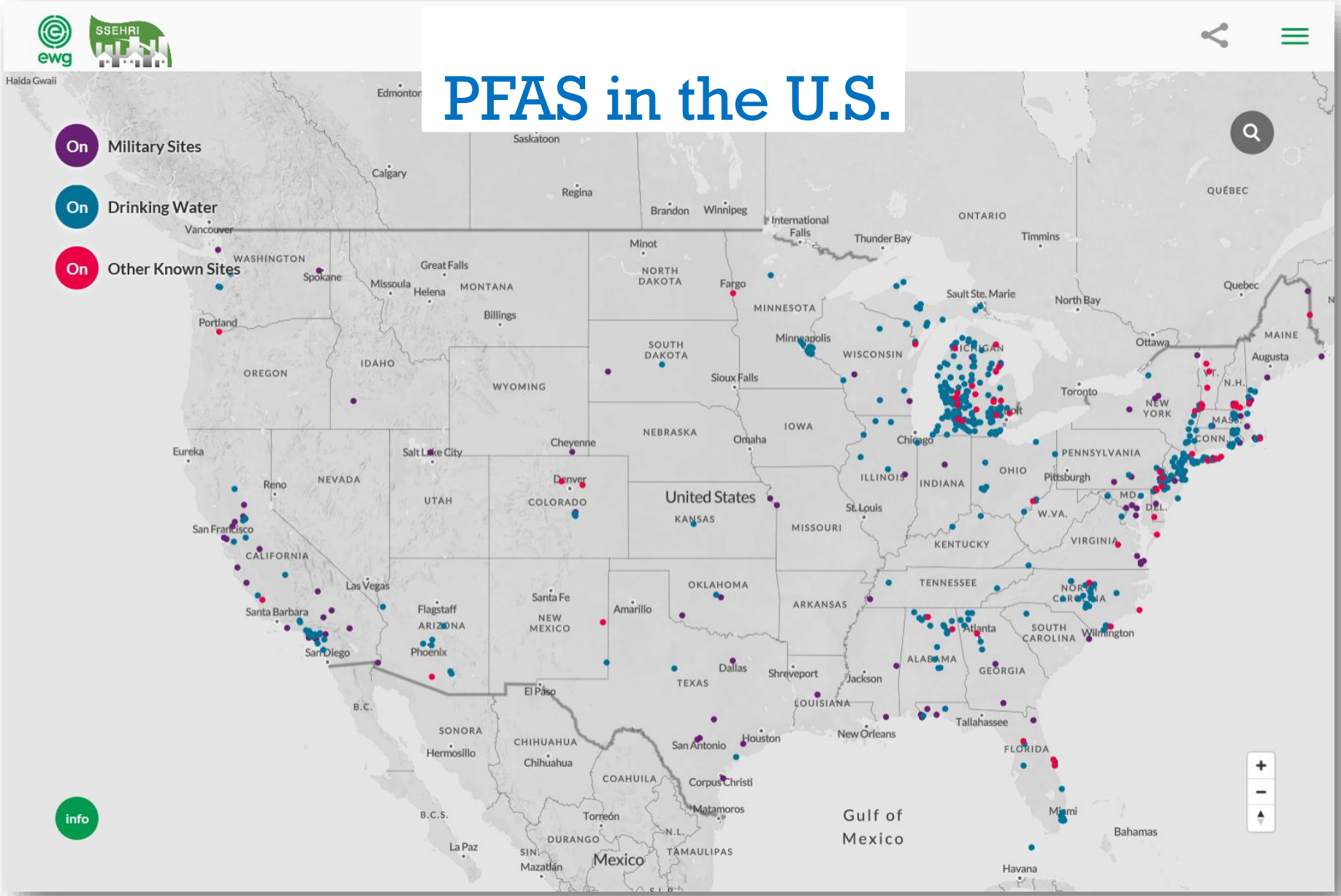
https://fluorocouncil.com/fluorocouncil/about/

PFAS Fact Sheets



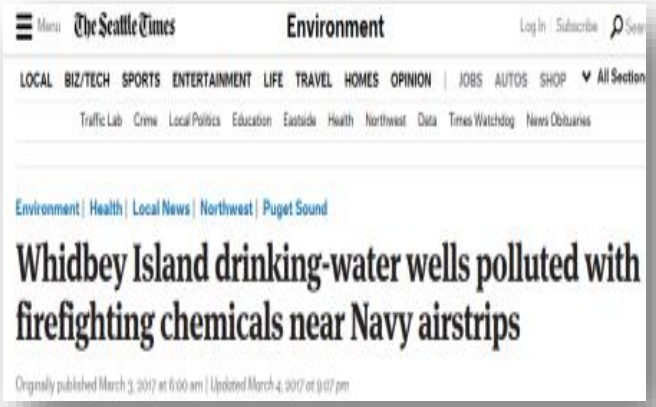
https://pfas-1.itrcweb.org/

PFAS in the U.S.



https://www.ewg.org/interactive-maps/2019_pfas_contamination/map/

PFAS in the news


The Seattle Times Environment

LOCAL BIZ/TECH SPORTS ENTERTAINMENT LIFE TRAVEL HOMES OPINION | JOBS AUTOS SHOP

Traffic Lab Crime Local Politics Education Eastside Health Northwest Data Times Watchdog News Obituaries

Environment | Health | Local News | Northwest | Puget Sound

Whidbey Island drinking-water wells polluted with firefighting chemicals near Navy airstrips

Originally published March 3, 2017 at 6:00 am | Updated March 4, 2017 at 9:07 pm


Fairchild partners with Airway Heights to provide water to residents affected by water advisory

92nd Air Refueling Wing Public Affairs / Published May 18, 2017


JBLM Wells Shut After Unacceptable Levels of Chemicals Found in Water

The News Tribune | 3 Mar 2017 | by Adam Lynn


SPOKANE

Neighbors of Fairchild Air Force Base sue makers of toxic fire retardant, including 3M Co.


The Seattle Times Environment

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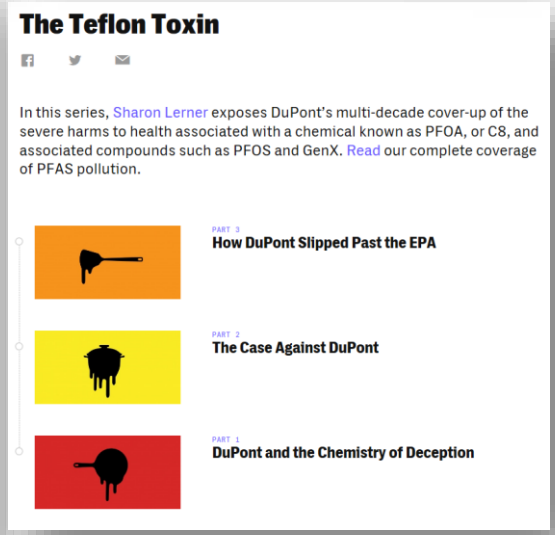
Traffic Lab Project Homeless Crime Local Politics Education Eastside Health Data Times Watchdog News Obituar

Environment | Local News | Nation & World Politics | Northwest

Washington state to test drinking water for PFAS contamination linked to firefighting foam

Originally published May 21, 2018 at 6:00 am | Updated May 21, 2018 at 10:10 am


The Teflon Toxin

In this series, Sharon Lerner exposes DuPont's multi-decade cover-up of the severe harms to health associated with a chemical known as PFOA, or C8, and associated compounds such as PFOS and GenX. Read our complete coverage of PFAS pollution.

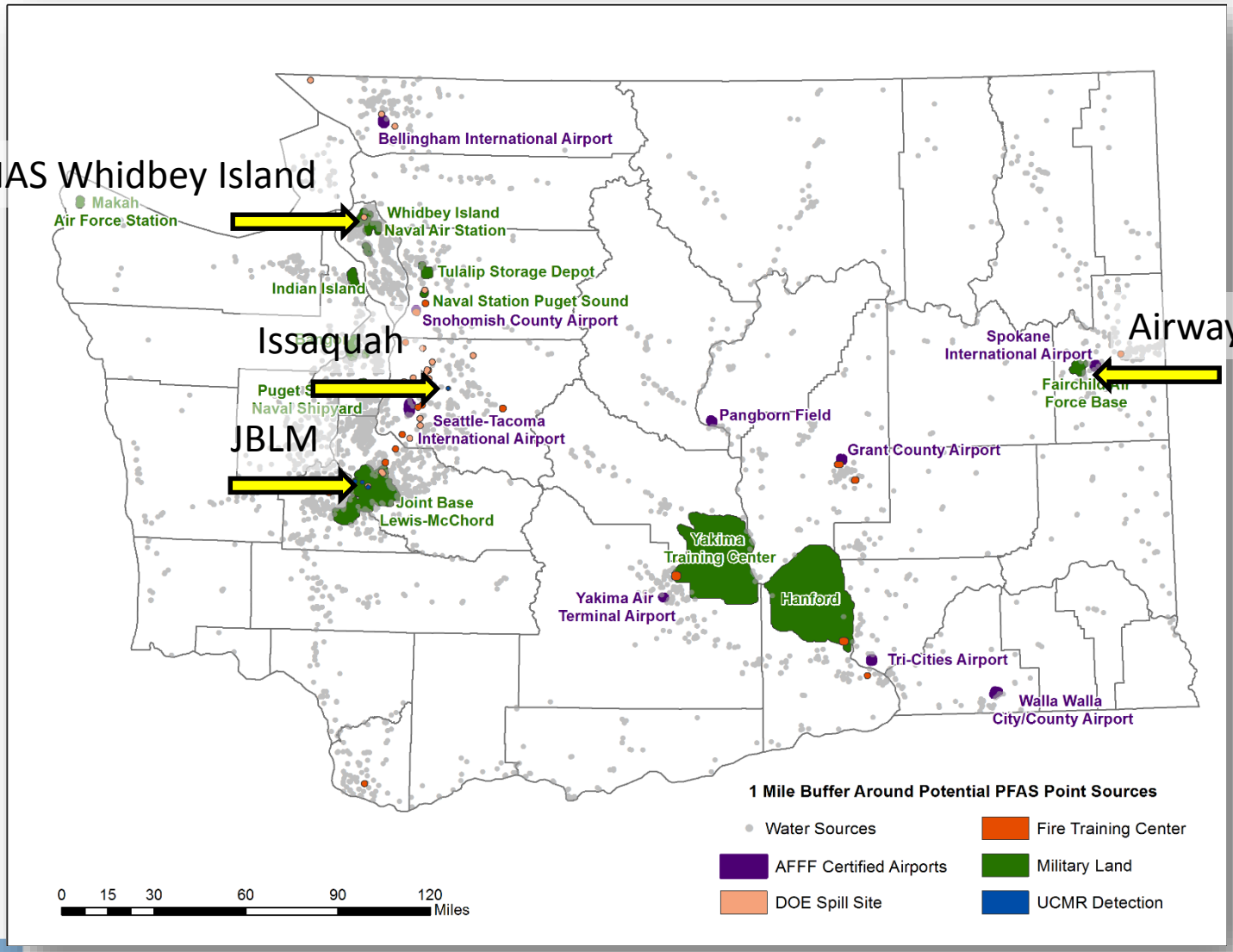
PART 3 **How DuPont Slipped Past the EPA**

PART 2 **The Case Against DuPont**

PART 1 **DuPont and the Chemistry of Deception**

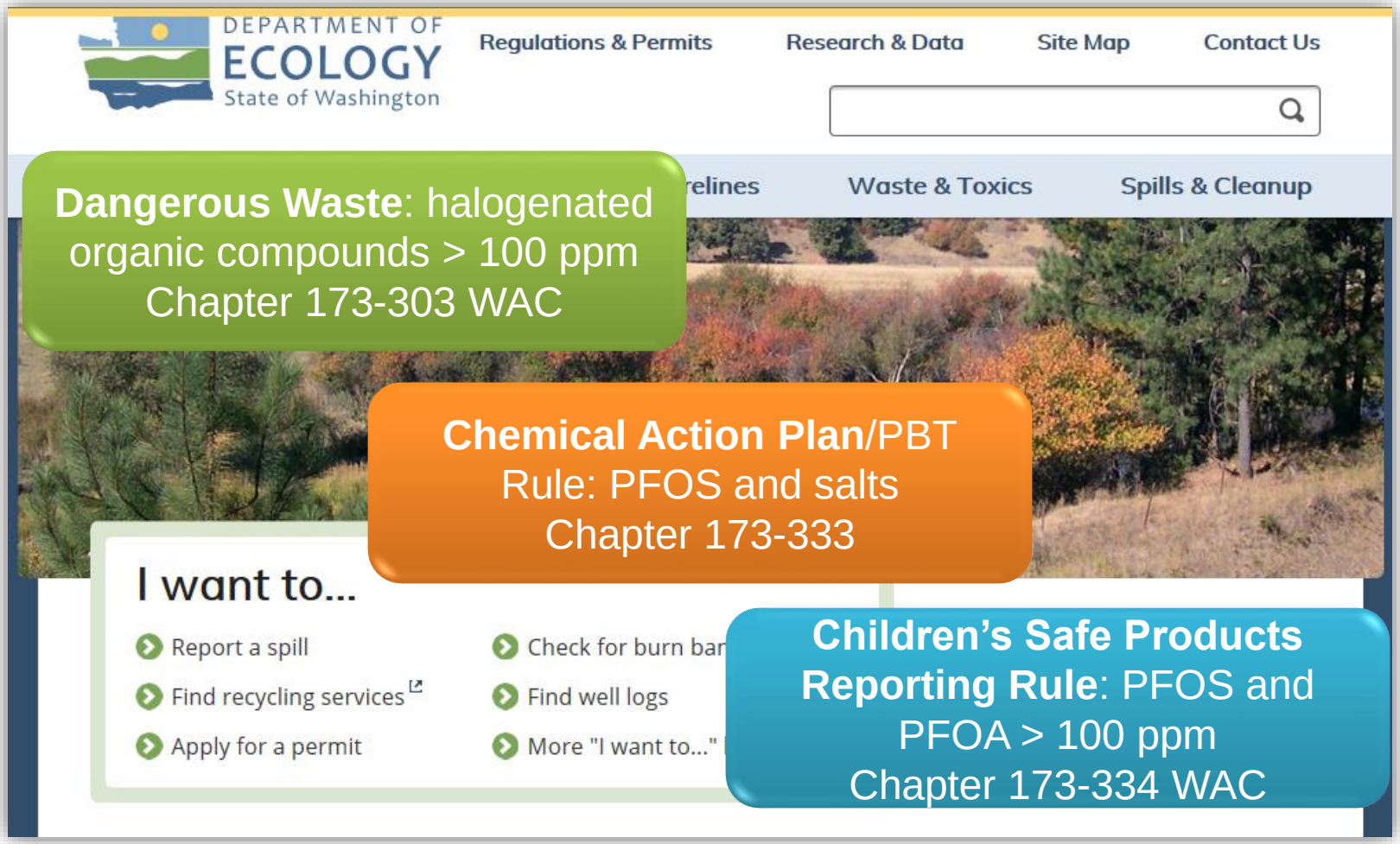
https://theintercept.com/collections/bad-chemistry/

PFAS in WA



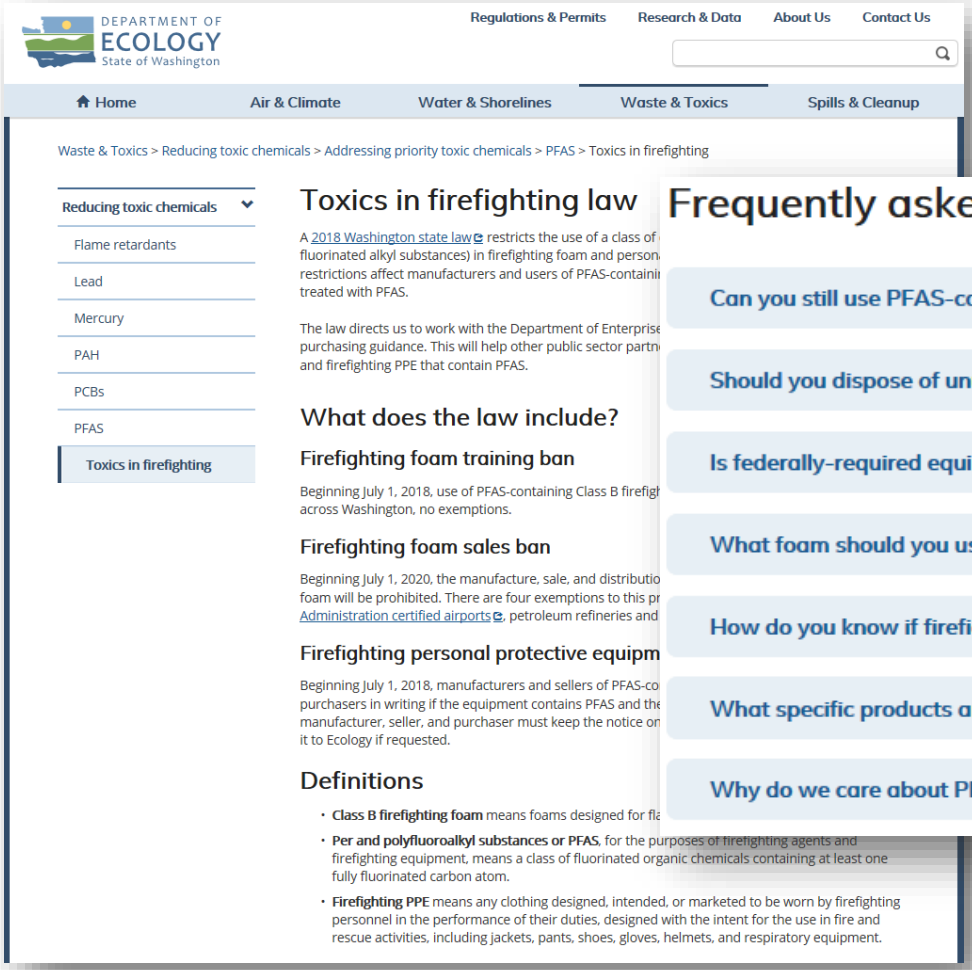
Map courtesy of WA Dept of Health

PFAS and Ecology



https://ecology.wa.gov/

PFAS firefighting foam



Chapter 70.75A RCW
http://app.leg.wa.gov/RCW/default.aspx?cite=70.75A

https://ecology.wa.gov/Waste-Toxics/Reducing-toxic-chemicals/Addressing-priority-toxic-chemicals/PFAS/Toxics-in-firefighting

PFAS food packaging

Hazardous Waste and Toxics Reduction Program

DEPARTMENT OF ECOLOGY State of Washington

Focus on: Alternatives to PFAS in Food Packaging

What are PFAS?

Per- and polyfluorinated substances (PFAS) are a class of synthetic chemicals used in hundreds of applications, including food packaging.

PFAS easily contaminate groundwater because they are water-soluble, highly mobile, and difficult to filter out.

Who is exposed to PFAS?

Everyone.

In recent years, PFAS have been detected in Washington lakes, streams, fish, and drinking water wells.

Why does food packaging contain PFAS?

PFAS helps keep grease, oil, and water from penetrating food packaging, such as paper and paperboard. Common examples include:

- Fast food sandwich wrappers.
- Restaurant take-out boxes.

Washington State will ban PFAS in food packaging

In 2018, the Washington State legislature passed a new law that prohibits all per- and polyfluorinated substances (PFAS) in paper food packaging.

This PFAS ban is part of the Toxics in Packaging Law (RCW 70.95G).[1] In 1991, the Washington State legislature passed RCW 70.95G to limit the amount of four toxic metals (mercury, cadmium, lead, and hexavalent chromium) in packaging sold in the state.

In 2018, this law was amended to add PFAS.

When will PFAS be banned in food packaging?

Safer alternatives to PFAS in food packaging must be available before the ban takes effect. The law requires Ecology to study PFAS in food packaging and assess the safety of alternatives. The ban will take effect January 2022, after we:

- Identify safer alternatives.
- Receive feedback from an external peer review.
- Publish the findings in the Washington State Register.

How do I comment on and stay updated?

Ecology and Department of Health are working together to develop a PFAS Chemical Action Plan (CAP).[2] The goal of a CAP is to identify the potential health and environmental effects of persistent, bioaccumulative, and toxic chemicals, and recommend actions to reduce or eliminate those impacts.

We have a PFAS CAP listserv where you can receive updates. To subscribe, visit the CAP Advisory Committee website.[3] We will host periodic conference calls to share updates on the PFAS AA. Those updates and any documents will be posted on the CAP website.

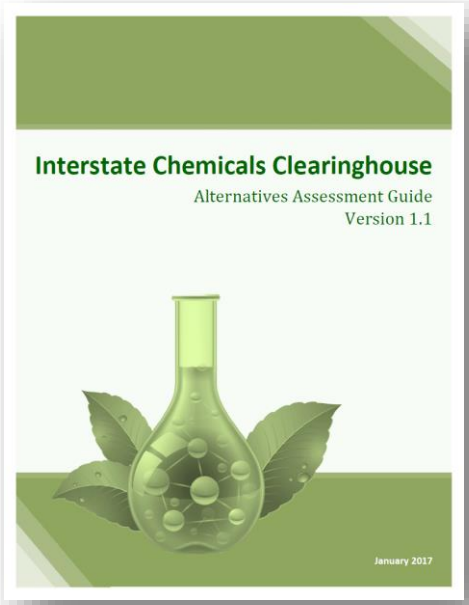
[1] http://app.leg.wa.gov/RCW/default.aspx?Cite=70.95G
[2] ecology.wa.gov/PFAS
[3] https://www.ezview.wa.gov/?alias=1962&pageid=37105

Publication 18-04-034 October 2018 Page 1

https://fortress.wa.gov/ecy/publications/documents/1804034.pdf

Chapter 70.95G RCW
http://app.leg.wa.gov/RCW/default.aspx?cite=70.95G

January 2022 – PFAS food packaging ban. **BUT first:** Ecology completes alternatives assessment.



Substitute Senate Bill 5135

Repeating five-year cycle.
Stakeholder process.
Legislative reports.
Transparent based on scientific evidence.
Request manufacturer information.

Priority Chemicals

- PFAS, PCBs, phthalates, phenols, flame retardants
- Defined in the law

Report June 2024

Priority Consumer Products

- Significant source of exposure to sensitive populations and species
- Report June 2020

Regulatory Actions

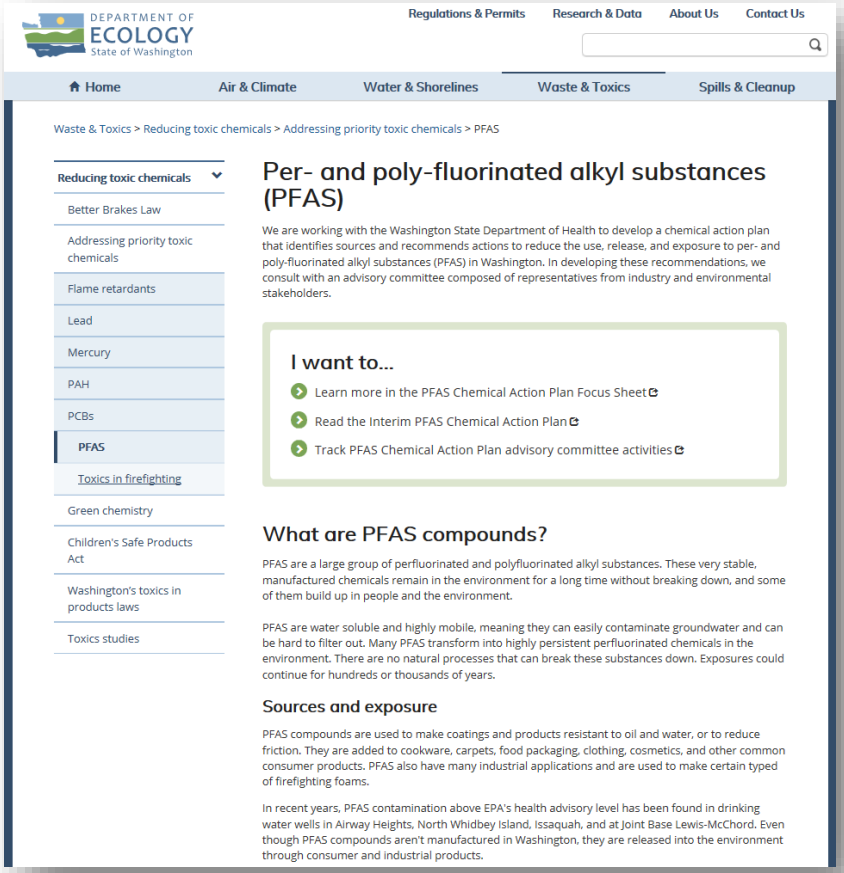
- Reduce exposure to sensitive populations and species, identify safer alternatives
- Report June 2022

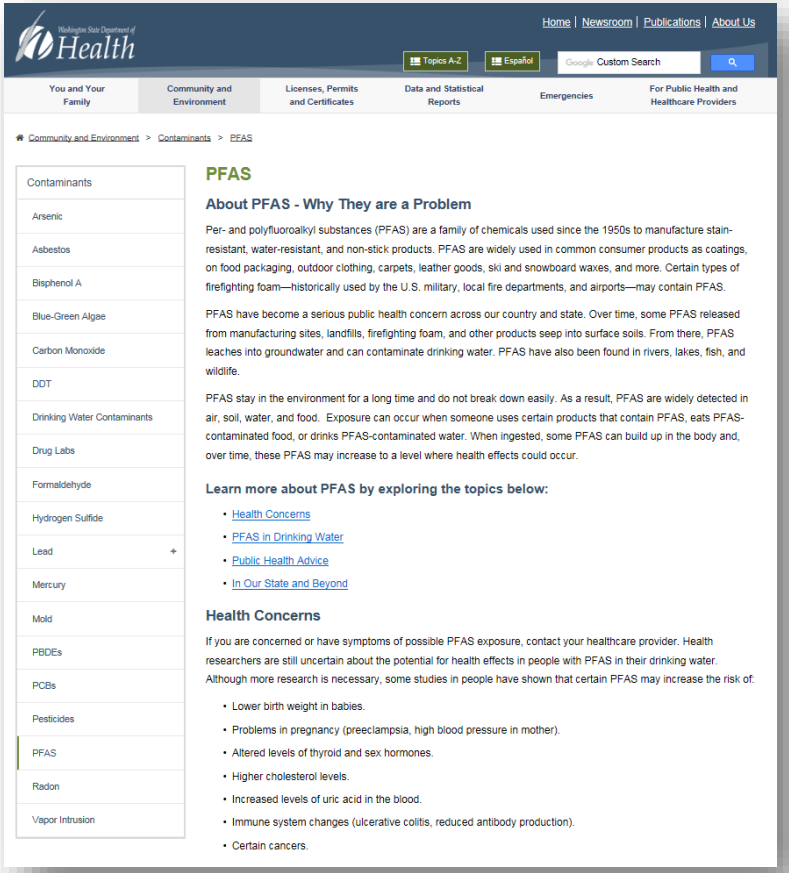
Rulemaking

- Require notification or restrictions of chemicals in products
- Adopt June 2023

https://app.leg.wa.gov/billsummary?BillNumber=5135&Year=2019
https://fortress.wa.gov/ecy/publications/documents/1904012.pdf

PFAS Resources and Information



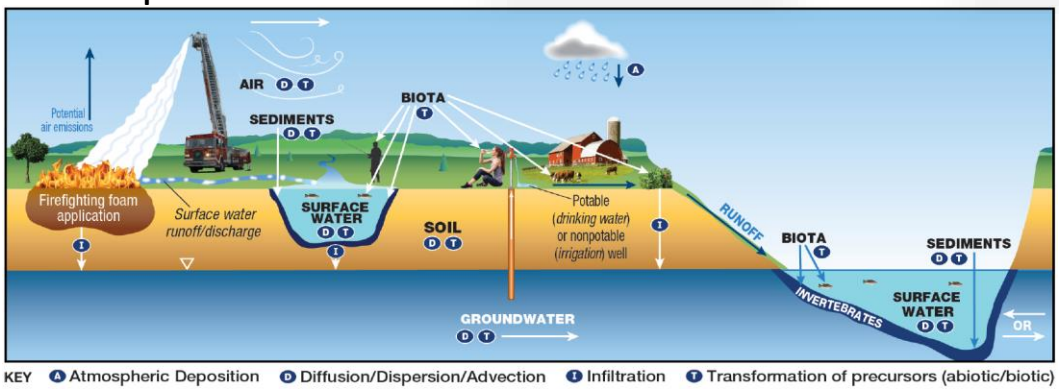


https://ecology.wa.gov/PFAS

https://www.doh.wa.gov/CommunityandEnvironment/Contaminants/PFAS

Chemical Action Plans

Conceptual Site Model



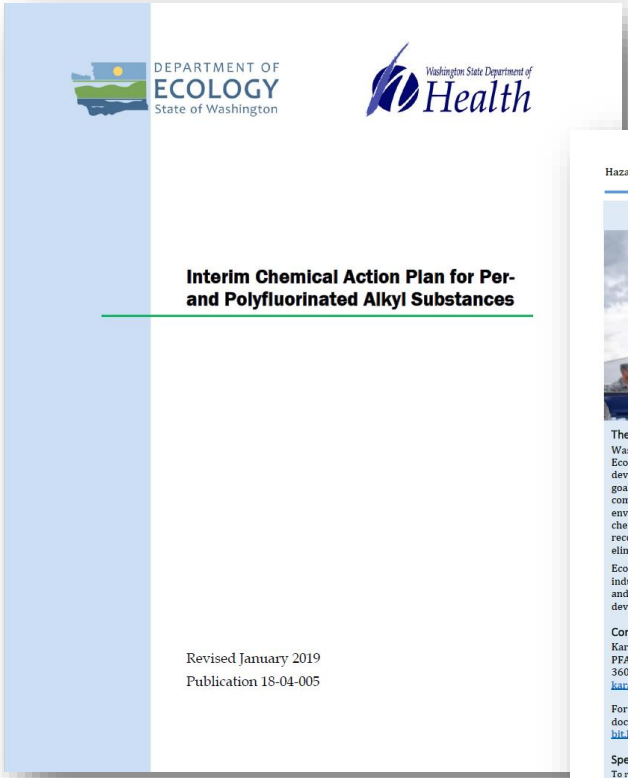
Chapter 173-333 WAC

http://app.leg.wa.gov/WAC/default.aspx?cite=173-333

Source: Adapted from L. Trozzolo, TRC, used with permission: https://pfas-1.itrcweb.org/fact-sheets/

PFAS CAP Advisory Committee

CAP Information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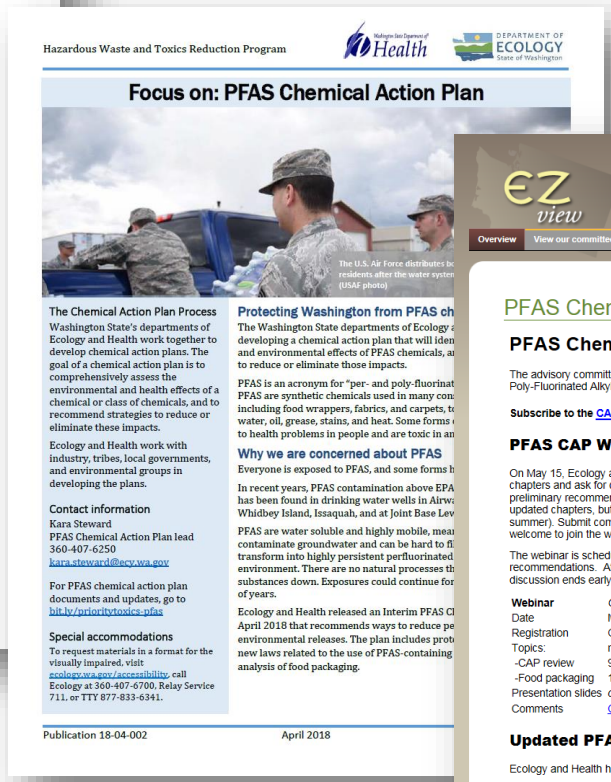
State of Washington

Washington State Department of Health

Interim Chemical Action Plan for Per- and Polyfluorinated Alkyl Substances

Revised January 2019
Publication 18-04-005


Hazardous Waste and Toxics Reduction Program

Washington State Department of Health

DEPARTMENT OF ECOLOGY State of Washington

Focus on: PFAS Chemical Action Plan

The U.S. Air Force distributes bo... residents after the water systen... (USAF photo)

The Chemical Action Plan Process

Washington State's departments of Ecology and Health work together to develop chemical action plans. The goal of a chemical action plan is to comprehensively assess the environmental and health effects of a chemical or class of chemicals, and to recommend strategies to reduce or eliminate these impacts.

Ecology and Health work with industry, tribes, local governments, and environmental groups in developing the plans.

Contact information

Kara Steward
PFAS Chemical Action Plan lead
360-407-6250
kara.steward@ecy.wa.gov

For PFAS chemical action plan documents and updates, go to bit.ly/prioritytoxics-pfas

Special accommodations

To request materials in a format for the visually impaired, visit ecology.wa.gov/accessibility, call Ecology at 360-407-6700, Relay Service 711, or TTY 877-833-6341.

Protecting Washington from PFAS ch...

The Washington State departments of Ecology ... developing a chemical action plan that will iden... and environmental effects of PFAS chemicals, a... to reduce or eliminate those impacts.

PFAS is an acronym for "per- and poly-fluorinat... PFAS are synthetic chemicals used in many con... including food wrappers, fabrics, and carpets, t... water, oil, grease, stains, and heat. Some forms ... to health problems in people and are toxic in an...

Why we are concerned about PFAS

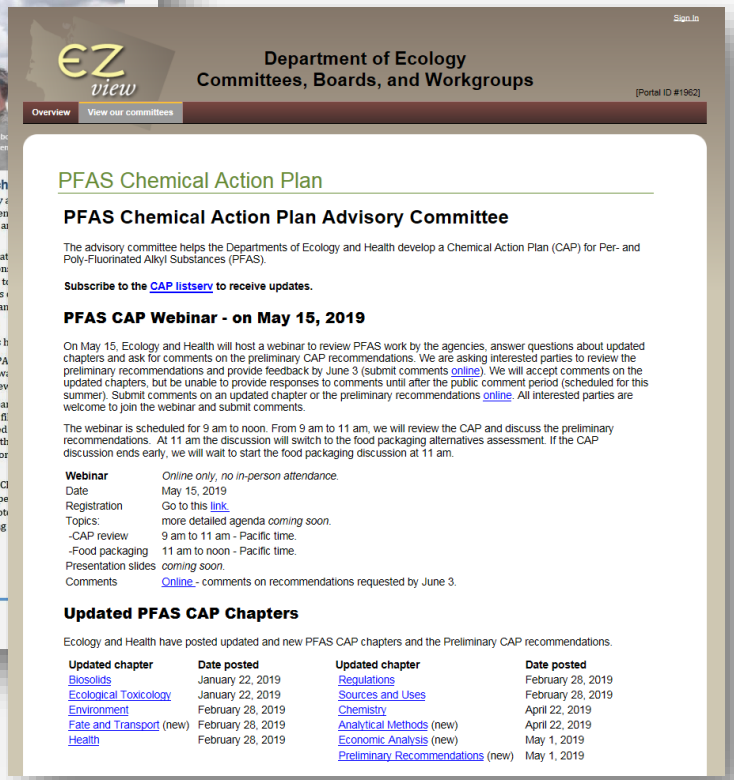
Everyone is exposed to PFAS, and some forms h...

In recent years, PFAS contamination above EPA... has been found in drinking water wells in Airw... Whidbey Island, Issaquah, and at Joint Base Lev...

PFAS are water soluble and highly mobile, mean... contaminate groundwater and can be hard to fi... transform into highly persistent perfluorinated... environment. There are no natural processes th... substances down. Exposures could continue for... of years.

Ecology and Health released an Interim PFAS Cl... April 2018 that recommends ways to reduce pe... environmental releases. The plan includes prot... new laws related to the use of PFAS-containing... analysis of food packaging.

Publication 18-04-002 April 2018


Sign in

EZ view

Department of Ecology Committees, Boards, and Workgroups

[Portal ID #1962]

Overview | View our committees

PFAS Chemical Action Plan

PFAS Chemical Action Plan Advisory Committee

The advisory committee helps the Departments of Ecology and Health develop a Chemical Action Plan (CAP) for Per- and Poly-Fluorinated Alkyl Substances (PFAS).

Subscribe to the CAP listserv to receive updates.

PFAS CAP Webinar - on May 15, 2019

On May 15, Ecology and Health will host a webinar to review PFAS work by the agencies, answer questions about updated chapters and ask for comments on the preliminary CAP recommendations. We are asking interested parties to review the preliminary recommendations and provide feedback by June 3 (submit comments online). We will accept comments on the updated chapters, but be unable to provide responses to comments until after the public comment period (scheduled for this summer). Submit comments on an updated chapter or the preliminary recommendations online. All interested parties are welcome to join the webinar and submit comments.

The webinar is scheduled for 9 am to noon. From 9 am to 11 am, we will review the CAP and discuss the preliminary recommendations. At 11 am the discussion will switch to the food packaging alternatives assessment. If the CAP discussion ends early, we will wait to start the food packaging discussion at 11 am.

Webinar	*Online only, no in-person attendance.*
Date	May 15, 2019
Registration	Go to this link.
Topics:	more detailed agenda *coming soon.*
-CAP review	9 am to 11 am - Pacific time.
-Food packaging	11 am to noon - Pacific time.
Presentation slides	*coming soon.*
Comments	Online - comments on recommendations requested by June 3.

Updated PFAS CAP Chapters

Ecology and Health have posted updated and new PFAS CAP chapters and the Preliminary CAP recommendations.

Updated chapter	Date posted	Updated chapter	Date posted
Biosolids	January 22, 2019	Regulations	February 28, 2019
Ecological Toxicology	January 22, 2019	Sources and Uses	February 28, 2019
Environment	February 28, 2019	Chemistry	April 22, 2019
Fate and Transport (new)	February 28, 2019	Analytical Methods (new)	April 22, 2019
Health	February 28, 2019	Economic Analysis (new)	May 1, 2019
		Preliminary Recommendations (new)	May 1, 2019

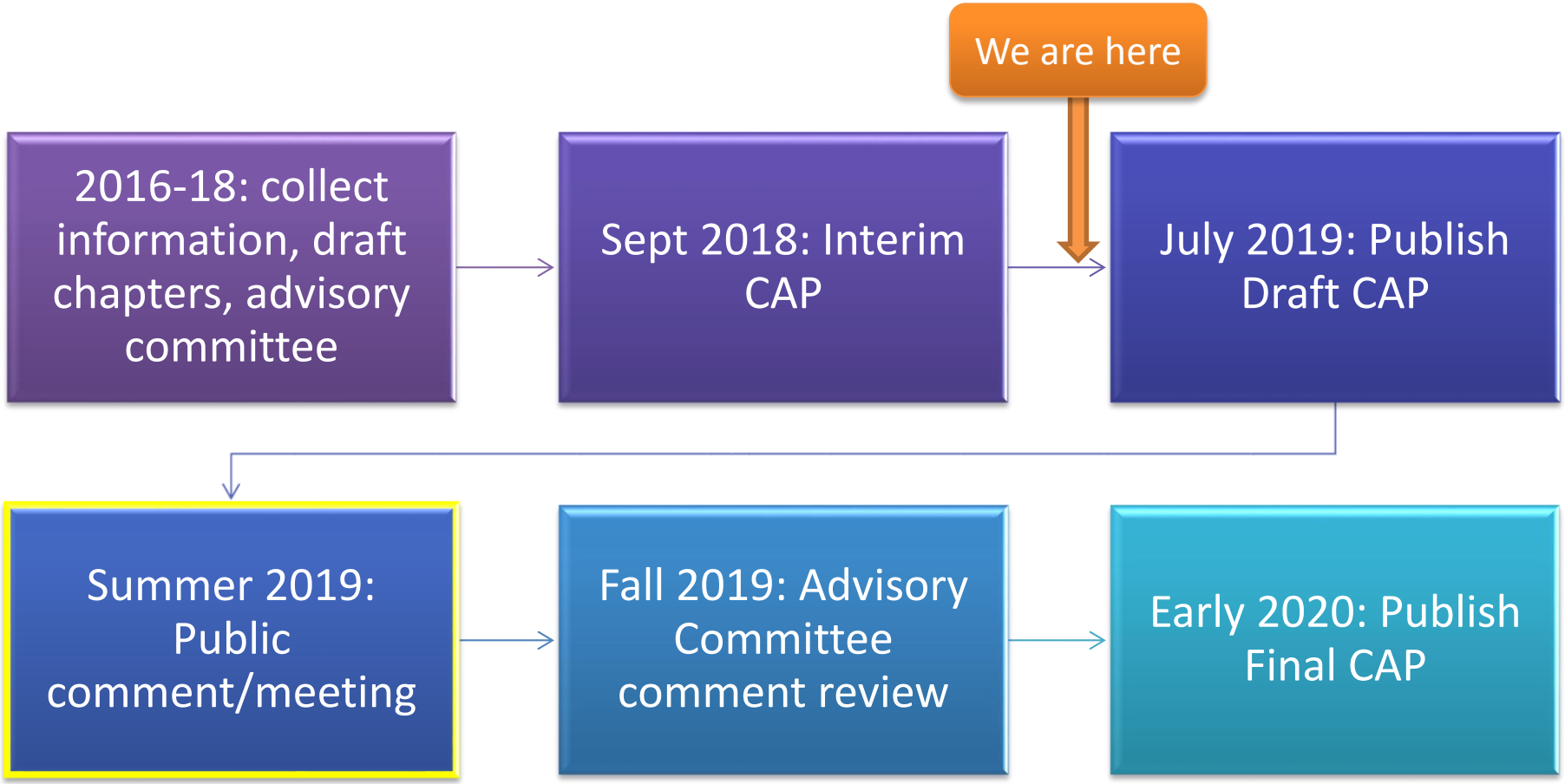
https://fortress.wa.gov/ecy/publications/SummaryPages/1804005

https://fortress.wa.gov/ecy/publications/SummaryPages/1804002

https://www.ezview.wa.gov/?alias=1962&pageid=37105

Washington State Department of Health

Where we are in the PFAS CAP process



WAC 173-333-430 - http://apps.leg.wa.gov/wac/default.aspx?cite=173-333-430
PFAS CAP website: https://www.ezview.wa.gov/?alias=1962&pageid=37105

Washington State Department of Health

Preliminary CAP recommendations

Safe drinking water

Environmental contamination

Reduce PFAS in products

Manage PFAS in waste

Ecology contact information

Kara Steward:

- 360.407.6250
- kara.steward@ecy.wa.gov

PFAS CAP Website:
https://www.ezview.wa.gov/?alias=1962&pageid=37105

CAP listserv:

http://listserv.ecology.wa.gov/scripts/wa-ECOLOGY.exe?A0=CHEMICAL-ACTION-PLAN